## CALCULATIONS

Location Longbranch and Pecos Roads'

Project Number 1055

Lot No: N/A

No. of Bedrooms 2

Design Flow 240 $^{gal}/_{day}$

LTAR 0.12 $^{gal}/_{ft^2\,day}$

GRAVELESS? (YES OR NO) NO

Supply Line Length 120 ft.

Supply Line Volume 20.88 gal.

Amount of Line from Layout 400' ft.

Gallons per Minute 26.1 $^{gal}/_{min}$

Required Septic Tank Capacity 600 gal.
Minimum Standard Tank Size 1000

Dosing Volume 200.00 gal.

*Note: Dosing Volume based on 5 - 10 times lateral volume plus manifold & SL vol.*

Lateral Line Volume 31.2 gal.
Manifold Volume 27.8 gal.

Tank Draw Down 9.5 *Generic Draw Down of 21 gal.per in.*

Pump Run Time 7.66 minutes

Elevation Head 6.5 ft.
Pressure Head 2 ft.
Friction Factor 1.37 ft./100 ft. *(From the interpolater.)*
Friction Head 1.64 ft.

Total Dynamic Head (+15%) 13.97 ft.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

| GPM | f |
|---|---|
| 20 | 0.84 |
| | -0.88 |
| 25 | 1.27 |
| | -1.28 |
| 30 | 1.78 |
| | -1.76 |
| 35 | 2.37 |
| | -2.25 |
| 40 | 3.03 |
| 43.07 | 3.48 |
| 45 | 3.77 |
| 48.14 | 4.28 |
| 50 | 4.58 |
| 57.11 | 5.89 |
| 60 | 6.42 |

# LPP FLOW CHART

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| Lateral Number | Elevation (ft) | Head (ft) | Hole size (in) | Flow per hole (gpm) | Length (ft) | Spacing (ft) | Number of holes | Flow per lateral (gpm) | Inst. flow rate (gpm/ft) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | FIELD | # 1 | | | | |
| 1 | 100.5 | 2 | 5/32 | 0.41 | 50 | 5.00 | 9.00 | 3.66 | 0.0733 |
| 2 | 100 | 2.5 | 5/32 | 0.46 | 50 | 5.56 | 8.00 | 3.64 | 0.0728 |
| 3 | 99.5 | 3 | 5/32 | 0.50 | 50 | 6.25 | 7.00 | 3.49 | 0.0698 |
| 4 | 99 | 3.5 | 5/32 | 0.54 | 50 | 7.14 | 6.00 | 3.23 | 0.0646 |
| 5 | 98.6 | 3.9 | 9/64 | 0.46 | 50 | 6.25 | 7.00 | 3.22 | 0.0645 |
| 6 | 98 | 4.5 | 5/32 | 0.61 | 50 | 8.33 | 5.00 | 3.05 | 0.0611 |
| 7 | 97.6 | 4.9 | 9/64 | 0.52 | 50 | 7.14 | 6.00 | 3.10 | 0.0619 |
| 8 | 97 | 5.5 | 5/32 | 0.68 | 50 | 10.00 | 4.00 | 2.70 | 0.0540 |

TOTAL LATERAL LINE LENGTH = 400 ft

TOTAL SYSTEM FLOW = 26.10 gpm

TOTAL SYSTEM REDUCTION FROM LINES 1 TO LINE 12 = 26.3%